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Plans
Timber Management - Neamath
Yreka Working Circle

February 26, 1944

THE YREKA WORKING CIRCLE

TRANSFERRED

Carl A. Gustafson

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Timber Management
Slamath
Yreka Working Circle

Yreka, California
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THE YREKA WORKING CIRCLE

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1. General Description

The Yreka Working Circle is bounded on the north by the Siskiyou Mountain Range, on the east by the Racker Act Boundary, on the south by the divide between Clarks Creek and Etna Creek, on the west by the Salmon River - Scott River Divide - the Marble Mountain primitive area boundary - the divide between Thompson Creek and the Klamath River and by the divide between Seiad and Horse Creek.

The gross area of the Working Circle is 491,507 acres of which 167,857 acres is commercial timber land, 48,780 acres logged over, 133,940 acres non-commercial timberland, 40,380 acres alpine, 68,770 acres of brush or brush grass, 10,780 acres of recent burns, 21,000 acres classified as agricultural.

The federal government own 221,710 acres, O & C 7,872 acres with the remainder owned by the Southern Pacific Land Company, Fruit Growers Supply Company, Roberts, Winton, Buschow, and about 92,145 acres owned by others.

(1) Non-commercial timber areas 133,940 acres are classified as non-commercial timber lands. There are numerous small pockets of timber in this area supporting commercial timber stands. Although cruise data for these pockets are lacking we know from observation that many pockets containing from 100 M to 500 M feet BM do exist. These small bodies of merchantable timber can be utilized by small mills; mills operating spasmodically and not cutting more than 50 M to 200 M feet BM annually.

The high percentage of non-commercial timber area is primarily a result of repeated surface fires during the past 50 years and also because for many areas the site is too poor to produce commercial stands of timber. It is estimated that about 40 per cent of this area may be classified as potential timber lands on the basis of site although it is doubtful if these lands will ever support a large volume of merchantable timber even with 100 per cent protection. The site is too poor generally, being in most cases site IV or lower. More information regarding distribution of these lands can be had by studying the appendix - Table 8.

(2) Brush Areas There are 68,770 acres of brush or brush grass covered lands in the Working Circle. Very little, if any, of these areas can be classed as potential timber lands. These lands are located on the lower slopes along the Klamath and Shasta rivers with small scattered areas on the slopes draining into the Scott River.

(3) Agricultural Lands 21,000 acres are classified as agricultural. Most of this area is in Scott Valley and is being farmed; used mostly for raising hay for beef and dairy stock with some devoted to raising grain, principally barley and oats. None of this area can be classified as potential timber growing land since economically it is more valuable for raising farm crops.

(4) Alpine Areas 40,380 acres of land classified as alpine areas are included in the Working Circle. None or very little of this land may be classified as potential timber land since it is very doubtful if it will ever produce a stand of timber of sufficient volume to permit logging at a profit. These lands, however, do have moderate grazing value.

(5) Burned Over Areas There are no serious burns within any of the Units excepting Middle Creek. A fire in this Unit occurred in 1938 seriously damaging the timber. Cruise data have been corrected to allow for the volume of timber lost by this fire.

10,780 acres of timber land have been burned over within recent years within the Working Circle. Most damaging fires are the Middle Creek Fire of 1938, the Barkhouse Fires of 1939 and '40 and the Sterling Mountain Fire of 1926.

Most of the timbered land burned over supported a commercial stand of timber. All of the burned area may be classified as potential timber land. However, very little of these recently burned areas are reproducing and it probably will be necessary to artificially revegetate them before another stand of timber can be grown.

The area burned by ownership and location, can be studied by referring to the map accompanying this report and studying the Appendix, Table 7.

(6) Logged over Land 48,780 acres of the Working Circle have been logged over. All of this area is good timber growing land, reproducing well except for about 900 acres of burned and can be classified as mostly site III with some site IV and V.

Summarizing there are 167,857 acres of commercial timber land within the Working Circle in addition there are 153,516 acres classed as potential timber land or a total of 321,373 acres capable of supporting a merchantable stand of timber.

A. Acreage

a. Government Ownership:

1. Cutover Out of a total of 48,780 acres of cutover land in the Working Circle the government owns 22,000 acres. Only a small part of this area was logged over under government administration. Most of it was acquired from the Fruit Growers Supply Company through Land Exchange. For further details as to distribution of the government cutover lands refer to the Appendix, Table 6.

2. Virgin The total area of commercial timber owned by the Federal Government in all Units within the Working Circle is 70,015 acres. Most of this area can be classed as mixed conifer with some areas of Douglas, White and Red fir. More detailed information concerning the distribution of commercial timber lands owned by the Government can be had by referring to the Appendix, Table 5.

b. Private Ownership:

1. Cutover There are approximately 24,520 acres of privately owned logged-over land within the Working Circle. Most of this logged-over land is in good shape and reproducing well. For more detailed information as to the distribution of this privately owned logged-over land by ownership and Units refer to the Appendix, Table 6.

There is approximately 1,860 acres of logged-over land that is under the administration of the O & C, in addition to the acreages mentioned above.

All cutover lands, although logged very heavily on privately owned areas are in good shape and reproducing well, except for some small areas, which have been burned over since logging.

2. Virgin There is about 96,000 acres of privately owned commercial timber lands within the Treka Working Circle. For detailed information as to the distribution of these lands by ownership and by Units refer to the Appendix, Table 5. In addition to the above 2,072 acres is listed as being owned by O & C.

Most of the privately owned commercial timber areas can be classed as mixed conifer with some areas of Douglas, White and Red fir.

B. Volume - MM feet BM

a. Government

PP	407.1
SP	282.1
DF	455.3
WF	253.2
RF	60.7
IC	72.3
Hem.	1.9
Total	----- 1532.6

b. Private

PP	402.1
SP	270.0
DF	251.2
WF	104.8
RF	52.3
IC	11.6
Hem.	7.2
Total	----- 1099.2

C. The primary purposes to be accomplished in the management of the timber resources of the Yreka Working Circle are:

1. Stabilization of the established industrial plants in the locality which have sufficient capacity to utilize all the timber in the Working Circle. *What about present idea of supplying wood?*
2. Acquisition of privately owned lands having a bearing on the management of all resources in the area assigning the highest priority to acquisition of timber growing lands. *with residual stands*
3. Utilization of the Government owned timber in those areas that cannot be operated on a sustained yield basis because of diversity of ownership and topographical separation to gain better cutting practices on private lands and through land exchange obtain title to these lands as they are cutover.
4. Operate the timber in the Horse Creek Unit on a sustained yield basis and if an agreement can be worked out with a private company, operate all timber in the West Scott Valley, Kelsey Creek, Middle Creek, Canyon Creek, and the south west portion of the Scott Bar Mountain-Mill Creek Units on a sustained yield basis.

D. Silvicultural treatment of the various species will:

- (a) Favor the propagation of the pines where this is possible.
- (b) Leave a clean, healthy saw timber stand capable of good growth and maximum wood production.
- (c) Follow the approved Region 5 system of marking for all species.

E. Physical and other pertinent data relating to Working Circle

A. Accessibility and Outlet Condition. All timber products from the West Scott Valley, Scott Bar Mountain-Mill Creek, Kelsey Creek, Canyon Creek and Middle Creek Units must pass through Fort Jones on its way to the railroad point at Yreka. It is sixteen miles from Yreka on the Pacific Highway to Fort Jones and Scott Valley. On this surfaced two lane road, a thousand foot summit must be negotiated; however the radius of curvature is such that full length logs (32') can be transported over this road.

1. Scott Bar Mountain-Mill Creek Unit:

To reach the Scott Bar Mountain timber from Fort Jones, there is an eight mile haul over a level dirt road and in addition five miles of an exceedingly steep twisty climb of 2450' to reach the summit approximately in a geographical center of the unit. It will be necessary to construct a high standard utilization road from the valley floor to make the area accessible.

2. Middle Creek, Kelsey Creek and Canyon Creek Units:

The Scott River road runs down the Scott River canyon through recreation centers and below the merchantable timber in all these units. Most of the merchantable timber in these units lies on the slopes two thousand feet above Scott River. To reach the timber it will be necessary to construct utilization roads beginning approximately fifteen miles down the river from Fort Jones, having a climb of about two thousand feet through unproductive country. Private construction would probably delay utilization of the timber in these Units due to the high cost. Construction of a utilization road by the Federal Government would no doubt hasten the utilization.

3. West Scott Valley Unit:

A good oiled highway extending from Fort Jones to Etna parallels the east boundary of this Unit for a distance of ten miles. Also a road up Etna Creek with some betterment could be used as a utilization outlet for some of the area. There are no utilization roads within the main body of the timber in this unit. The average haul to Fort Jones would approximate fifteen miles.

4. Lumgreys Unit

The logical outlet for this timber is Lumgreys Creek located on the Klamath River highway 20 miles from Yreka. A road the Forest Service has constructed up Lumgreys Creek through the heart of this unit could be used as a utilization outlet without a great deal of betterment work. The average log haul to the mouth of Lumgreys Creek approximates six miles.

5. West Beaver Creek-Doggett Creek Unit

The outlet for the greater portion of the timber in this Unit is down Beaver Creek, located twenty five miles on an oiled highway from Yreka. The average log haul to the mouth of Beaver Creek would approximate ten miles. The Forest Service constructed road from the mouth of Beaver Creek to Cinabar Springs could be used as a utilization outlet with little betterment. The Fruit Growers Supply Company, who are constructing a road to their timber in the vicinity of Dutch Creek has provided another utilization outlet for some of the Forest Service timber in this area.

The Doggett Creek timber in all probability would not come out through Beaver Creek but over the road through Oak Knoll and thence to the mill site in the vicinity of the mouth of Beaver Creek. Oak Knoll is located twenty eight miles down the Klamath River on an oiled road from Yreka.

6. Horse Creek Unit

Horse Creek, a subdrainage of the Klamath River, is fifty miles from Yreka on the Klamath River highway. No utilization roads are located in the Horse Creek area. Some old roads do exist but in all probability cannot be used due to their location. The average log haul from the Horse Creek Unit to the mouth of Horse Creek would approximate seven miles.

7. McKinney Creek Unit

The mouth of McKinney Creek is located twenty eight miles down the Klamath River from Yreka. In all probability a five mile haul down McKinney Creek would be the average haul for the timber in this Unit. No useable roads are located within the Units boundaries.

8. Humburg-Clear Creek Unit

Humburg Creek is located twelve miles northwest of Yreka on a dirt road. About 20 miles of expensive utilization road construction and betterment will prove necessary to provide an outlet for the timber in this Unit. The timber in Clear Creek and in the lower reaches of Humburg Creek will be the most difficult to move due to the factor of distance and cost of road construction.

9. Cow Creek Unit

This unit is located about 17 miles from Hilt on a dirt road. All the timber must come down Beaver Creek, thence over the Hungrey Creek summit if milling is to be down in the Hilt plant. There are no roads in the area. Due to the high percentage of Red and White fir (60%) and the high cost of road construction, this unit is economically unattractive.

2. Topography and Drainage

a. Horse Creek, West Beaver-Dogget Creek Units

These Units, 7 x 16 miles in extent, lie in a rough mountainous region. The Klamath River flows westerly on the south side of the Units in a deep open canyon. From the river there is a gradual rise northerly for a distance of eight to ten miles to the Siskiyou Summit. These slopes are broken by the deep canyons of Horse, Middle, Buckhorn, Dogget and Beaver Creeks all heading back to the summit. The fall at the heads of all these creeks is very rapid but gradual on their lower courses. Beaver Creek on the east side of these units is the largest with several important tributaries, namely, West Beaver, Bear, Trapper, Jane and Dead Cow Creek, heading with a great westward sweep in behind Dry Lake Mountain. The Dry Lake ridge is the most prominent topographic feature after the Siskiyou Summit and divides the project into two distinct units. A fork of this ridge extending south-easterly to Round Mountain further separates the Dogget Creek timber from that in Beaver Creek. High gradual descending ridges that rise two thousand feet above the creeks separate the various drainages. Slopes are only averagally steep and surfaces not excessively rough. The exposures are generally to the south but details may be in any direction. At the head of the tributaries of West Beaver, exposures are usually to the north.

b. The Lumbrey Unit

This Unit lies in an even more rough and mountainous region than the Horse Creek or West Beaver-Doggett Creek Units. This Unit is located on the north side of the Klamath River at the head waters of Lumbrey and Empire Creeks. Buckhorn mountain is the most prominent topographic feature in this Unit and from this point most of the timber in this Unit can be seen. Slopes are above the average in this unit especially on the area sloping into Beaver Creek.

c. The McKinney Creek Unit

This Unit lies north of the ridge between Bald Mountain and Deadwood from Dona Creek on the west to the head of Barkhouse Creek on the east. The entire area lies within an unusually rough, rocky, mountainous region.

d. The Scott Bar Mountain-Mill Creek, Kelsey Creek, Canyon Creek and Middle Creek Units

These Units lie within an unusually steep, rough, rocky, mountainous region. A large volume of water flowing through the Scott River out of Scott Valley and high back country has had to cut a deep canyon on its way to the Klamath.

The elevation of Scott Valley is 2800' and just as Scott River leaves the valley it begins to cut its rocky gorge through the Klamath mountains which rise to 7000' in elevation. At Spring Flat in the center of the canyon the elevation is 2200'. There is, therefore, a 4800 foot rapid climb to the high summit. Practically all of the merchantable timber on these slopes is at an elevation between 4000' and 5000'. The drop from Spring Flats to the Klamath River is from 2200' to 1600' or 600' through a rugged untimbered canyon. Throughout the river course below Scott Valley its tributaries run in narrow canyons, have a very rapid fall, usually head up into narrow top ridges, the only exception is the Scott Bar mountain ridge between Scott Valley and Mill Creek where the top flattens out. These flats afford extraordinary heavy coniferous mixed stands of timber of high quality and the slopes are not nearly as broken as they are on the other three Units in this general area.

e. West Scott Valley Unit

The western rim below which the timber in the West Scott Valley Unit lays consists of the Scott Salmon River divide which has an average elevation of about seven thousand feet. The upper slope of this Unit is extremely rugged, the intermediate and lower slopes are also badly broken from Etna Creek northward to the divide between Canyon and Shackelford Creeks. This Unit laying on the east slope of the Scott-Salmon Summit is cut by Etna, Patterson, Kidder, Mill and Shackelford Creeks. These creeks have formed deep and narrow canyons which when added to the scattered nature of the stand divides the area up into numerous small logging chances.

f. The Humbug Creek-Glear Creek Unit

This Unit takes in the headwaters of Humbug Creek drainage, also the headwaters of the Glear Creek drainage, which creek drains into Humbug Creek one mile from its mouth. It is located in a rough and unusually rugged mountainous area. Numerous small side drainages of Humbug Creek makes utilization road location and construction difficult. This area which drains into the Klamath River in a north northeasterly direction is surrounded by high and well defined ridges.

g. Cow Creek Unit

This Unit lies on the South side of Cow Creek, a drainage of Beaver Creek. The elevation ranges from 4000' to 6000'. The Sterling Mountain Ridge separates this Unit from the West fork of Beaver Creek. The exposure is North-Northeast accounting for the high percentage of White and Red fir. The topography is steep to very steep generally.

3. Locality of Timber

a. The valuable timber within the Horse Creek, West Beaver-Dogget Creek Units occurs within a very distinct belt at intermediate elevations and midway between the Klamath River and the Siskiyou Summit. The average elevation of the Klamath River and the lower ridges of Beaver Creek is about 1700'. For a distance of one to two miles up from the river or up to an elevation of 2000' to 2500', depending upon whether the exposure is to the north or south. The slopes are untimbered or support only a scattering growth of unmerchantable trees. The first timber consists of a light stand of very small sized Ponderosa pine and Douglas fir; the Ponderosa pine predominating on the south and Douglas fir on the north slopes. Ascending the mountain the quality and density of the stand improves and the more valuable Sugar pine comes into the mixture in increasing amounts until at elevations of between 3500' to 4500', are heavy mixed Coniferous stand in all creeks that compare favorably in amount and quality with any in the coast range. All the main species are well represented but the amount of Douglas Fir is unusually high particularly in the Horse Creek drainage where there is a total gross volume of more than 200MM feet BM. Especially fine stands of mixed conifer are found above the Lanish ranch on Salt Gulch and above Cinabar Springs on West Beaver Creek. At increasing elevations the Ponderosa pine first drops out, then the Sugar pine until finally as the summit approaches there are stands of pure White and Red fir and Hemlock. At the highest summit there are large areas of semi-barren land with only a small growth of Alpine shrubs. These areas are locally known as Glades.

b. In the Scott Bar Mountain-Mill Creek Unit there is almost a continuous body of almost pure Ponderosa pine on easy logging ground on the slopes southerly from Scott Bar Mountain Lookout. The remainder of the timber in this Unit lies on both sides of the Scott Bar mountain ridge and supports the heaviest and best quality stand within the Unit--probably some of the best timber in Northern California. The highest quality timber is located on the south side of the ridge with excellent pockets in some of the basins on the North side of the main ridge. This body of timber extends from Scott Bar Mountain Lookout, easterly towards Yreka by way of Indian Creek, Baldy and Deadwood Mountains. The government timber on sections to the west of Mill Creek-Scott Valley road is especially heavy, is of highest quality and runs largely to Sugar pine and Ponderosa pine. Easterly from this road and around the Baker ranch, the timber on government land is much lighter, of lower quality and often contains patches of brush. None of this high ridge timber is within easy reach of present transportation routes.

Within the Canyon Creek, Kelsey Creek and Middle Creek Units there are basins and slopes with excellent mixed coniferous timber running heavily to Sugar Pine and Ponderosa Pine. This is especially true of the Canyon Creek area timber which averages thirty six thousand broad feet per acre. However the ground is rather steep and at present with roads only a short way up the canyon access to this timber is difficult.

c. The timber stand in the West Scott Valley Unit is found on the mountain slopes and extends in a practically continuous belt from Etna Creek on the South to the ridge between Canyon and Shackelford Creek on the north. The best timber is found on the intermediate slopes in the basins and canyons of the numerous small streams draining into the valley. Timber commences at the base of the slope along the floor of the valley which is the east boundary of this Unit. It is of small size Ponderosa pine getting increasingly better as you ascend the slope. Numerous pockets of fair quality Sugar pine are found in the Unit. The combined effects of topography and variations in the density of the stand is to divide the timber in this Unit into many small logging chances all tributary to the valley floor.

d. The timber in the Lumgreys Unit is located in the headwaters of Lumgreys and Empire Creeks with some on the steep slopes into Beaver Creek. This area of almost pure Ponderosa pine is very rugged with the best timber being located in the basin at the headwaters of the two creeks previously mentioned. Probably the best timber in the area is located near the saddle where the Lumgreys Creek road joins the road to Buckhorn Baldy Lookout.

e. The timber in the Humbug-Clear Creek Unit is located in the headwaters of Humbug Creek with approximately ten million board feet located underneath Craggy Mountain in the headwaters of Clear Creek. A belt of timber from the headwaters of Clear Creek extending in a westerly direction on the north side of Humbug Creek is almost pure Ponderosa pine with Sugar pine mixture coming in at the higher elevation near the upper reaches of Humbug Creek. On the south side of Humbug Creek there is a considerable amount of Douglas fir with some Sugar pine, with Ponderosa pine occurring on the lateral ridges.

f. McKinney Creek Unit has a scattering body of Ponderosa pine, Sugar pine and Douglas fir timber extending from Dona Creek on the west to the headwaters of Barkhouse Creek on the east. This timber lays just north of the main ridge between Collins Creek, Baldy and Deadwood Lookouts. The timber occurs in small basins and along some of the ridges but is uniformly light as to volume per acre.

g. The timber in the Cow Creek Unit lies on the north slope of Cow Creek. Sugar pine and Ponderosa pine are the most important species at the lower elevations with White and Red fir coming into the stand as you ascend the slope. The upper reaches of this Unit is characterized by practically a pure stand of White and Red fir.

4. Silvical Characteristics

A. Brief Description of Individual Species

1. The timber in the Horse Creek, West Beaver-Dogget Creek Units is uniformly similar as to composition and size.

Ponderosa pine makes up about 15% of the total stand. It occurs most commonly on south exposures and on ridge tops at the lower to intermediate elevations. The average diameter of trees to cut is approximately 35" with a maximum of 70" and an average number of logs of 6.3 with a maximum of 10. It attains its best development at intermediate elevations, where deep soil has accumulated and in mixture with White fir and Sugar pine. In these situations it has a well shaped, full cylindrical sound bole with 2 to 3 logs, clear of limbs. Burn scars are frequent. Insect^mestation is below normal.

Sugar pine is the outstanding tree within these Units both in size and quality. It makes up approximately 15% of the total stand and is found at the intermediate to higher elevations. It is at its best on northeast exposures and in pockets like ^{at} suppressions just below the top of the ridges. The average diameter of trees to cut is approximately 44" with a maximum of 94" and an average of 7.1 logs with a maximum of 10. It is generally found with little taper but the defects are a little greater than in the Sierra Region--sometimes has three to four logs clear of limbs.

White fir forms around 19% of the total volume. It usually occurs on the north slopes and at higher elevations with Red fir or in the sharper canyons at intermediate elevations with Douglas fir. The trees to cut average 34.5" diameter with a maximum of 64" and an average height of 6.6 logs with a maximum of 10. The taper is rapid, the bole limby, with considerable defect.

Douglas fir, the most common tree within the Units, particularly the Horse Creek Unit, makes up about 35% of the total stand. It occurs at all elevations except the highest. At the lower elevations it is found in pure stands on the north slopes. Its average diameter is 38" and average height 6.4 logs. It is usually sound with an average taper and a well shaped bole.

Red fir is of minor importance occurring only at the higher elevations. It has considerable defect, particularly butt rot and has a poorly shaped trunk.

2. In the Scott Bar Mountain-Mill Creek, Kelsey Creek, Middle Creek and Canyon Creek Units, Ponderosa pine forms a high percent of the total stand, approximately 40%. Its optimum occurrence is on the level ridges and upper south slopes where deep soils have accumulated and at elevations of around 4500'. It is the dominate tree in the stand at the lower elevation and on south slopes. Examples of the best quality trees are found around the head of Pat Ford Creek and Scott Bar Mountain ridge. The average diameter to cut is 38", the average height is 5.9 logs. It has an unusually well shaped, full cylindrical, sound bole about 1.3 logs clear of limbs. Insect damage is only slight but butt burns are common.

Sugar pine in these units makes up about 20% of the total stand at the intermediate to higher elevations, especially in sheltered situations and pockets just below and north of the top of ridges. There is some especially fine Sugar pine such as in Section 30, Township 45 North, Range 9 West, just north of Scott Bar Mountain ridge and in Canyon Creek and Middle Creek at 4500' in elevation. It is best in quality associated with White fir. The average size to cut is about 39" in diameter and 6.3 log in height. The maximum diameter is 78" and height 10 logs. It is generally sound and the taper especially for the first two logs is very gradual. Insect damage is light.

White fir forms between 10 and 15% of the total stand. It occurs most commonly on northern slopes and at the intermediate to higher elevations, also to some extent in the deeper shaded canyons at lower elevations. Defects are common. The bole is limby and with a rapid taper. The average diameter to cut is 32" and the average height about 6 logs. In isolated instances the diameter is 60" and the height is 10 logs.

Douglas fir is the dominate species at the lower elevations of the canyons and also well mixed in the stand at intermediate elevations. Large heavily limbed trees are of a common occurrence with an average diameter of about 35" and the height about 6 logs.

Incense Cedar in this area occurs as a minor species. The bole is irregular in shape, short and has a very rapid taper. Defects are high. The average diameter is 37" with a height of about 4 logs.

3. Ponderosa pine in the Lungrey Unit makes up approximately 49% of the total volume. The tree in this Unit is not of as high a quality as Ponderosa pine is in the Horse Creek or Beaver Creek Units. The bole is not as clear of limbs, taper is more rapid and the average diameter and lot height is less, however quality is medium and since there is such a large percentage of pine in this area, the area should prove attractive for this one reason alone.

Sugar pine comprises 17% of the total stand by volume. The tree is poorer in quality and considerably smaller in size than the Sugar pine in either Horse Creek or West Beaver.

Douglas fir makes up about 23% of the volume. The trees are rather limby with very few of the trees having any clear logs. Taper of the bole is rapid, the height and diameter of the tree is considerably less than trees of this species on the Horse Creek Unit.

White fir makes up less than 5% of the volume and as a tree from which lumber is to be produced is very poor in quality. It is not important to this Unit.

Incense Cedar similar to White fir is of no importance in this particular unit. The trees are short with small diameter and crooked boles. Like White fir, rot is high.

4. The Humbug-Clear Creek Unit contains about 45%, 18%, and 30% of Ponderosa pine, Sugar pine and Douglas fir respectively. Other species are of very minor importance. The Ponderosa pine in this Unit is of fair to low quality with the best quality pine occurring in the headwaters of Clear Creek. Here the average quality could be rated good. Many trees would have from one to one and a half clear log per Bole.

Sugar pine comprising 18% of the stand by volume is from good to poor quality. It occurs mainly in the upper regions of the Humbug drainage with Douglas fir. This specie cannot compare with the Sugar pine in Beaver Creek or Horse Creek as far as quality or size is concerned.

Douglas fir comprising 30% of the stand is of fair quality compared to the same species in other areas on the east part of the Klamath. It is much smaller in size than the Douglas fir in Horse Creek, probably has more big limbs per hole, is shorter in height and with a smaller diameter.

5. Ponderosa pine makes up 48% of the stand in the McKinney Creek Unit with Sugar pine 19% and Douglas fir 32%. The same description that applies to the Humbug unit applies equally well here, in that the timber is not of the highest quality.

B. Reproduction

a. A summary of the amount of reproduction in all types as reported by the estimators is as follows:

(1) For the Horse Creek, Beaver-Dogget Creek Units:

On 1% of area there is no reproduction
On 25% of area reproduction is scarce
On 37% of area there is 1/3 stocking
On 30% of area there is 2/3 stocking
On 7% of area there is full stocking

(2) Scott Bar Mt.-Mill Creek, Kelsey Creek, Canyon Creek, Middle Creek and West Scott Valley Units:

On 1% of total area there is no reproduction
On 3% of total area there is scant reproduction
On 18% of total area there is 1/3 stocking
On 20% of total area there is 2/3 stocking
On 58% of total area there is full stocking

(3) Although there isn't any information available on the degree of stocking on the other Units in the Working Circle it is safe to say the amount of reproduction is fair and probably compares favorably with the above.

b. The species represented in the above stocking tables is as follows:

(1) For the Horse Creek, Beaver Creek-Dogget Creek Units:

Ponderosa Pine	23%
Sugar Pine	9.5%
White Fir	19.6%
Douglas Fir	34.7%
Incense Cedar	5.1%
Red Fir	8.1%

(2) The species in the West Scott Valley, Scott Bar Mt., Canyon Creek, Middle Creek and Kelsey Creek Units do not vary greatly from the table given above with the exception that Red fir is almost absent and the percentage of Ponderosa pine is higher (30%).

Although it is not known factually the extent of the reproduction by species in the other Units of the Working Circle, it is safe to say that Sugar pine and Ponderosa pine make up approximately 10% and 30% respectively.

C. Pole Stand

1. The average number of trees per acre, 4" to 10" in diameter, in the Horse Creek, Dogget Creek and West Beaver areas are Ponderosa pine 10.5, Sugar pine 3.0, White fir 10.3, Douglas fir 17.1, Incense cedar 4.2, Red fir 4.3, or a total of 49.4 poles per acre within these diameter classes.

2. For the Scott Bar Mt.-Mill Creek, Kelsey Creek, Canyon Creek and Middle Creek Units the average number of trees per acre 4" to 10" in diameter are Ponderosa pine 13.6, Sugar pine 2.4, White fir 18.2, Douglas fir 18.4, Incense cedar 4.4, Red fir 0.6, or a total of 57.6 poles per acre.

3. Although no factual information is at hand for the West Scott Valley Unit it is quite safe to say that it compares quite well with the above figures as to the distribution of poles per acre.

4. Information for the Lumgreys Unit is not at hand. From observation it is known that the number of poles per 4" to 10" in diameter is somewhat lower than for the other Units described above.

5. For the McKinney Creek and Humboldt-Clear Creek Units information is lacking, however from observation it is known that young growth 4" to 10" in diameter is quite well represented in the stand.

D. Distribution of Older Age Classes

The older age classes are uniformly present over all the Units. Most of the older age classes are mature to over mature. The presence of cull is not as serious a factor either in the Sugar pine or the Ponderosa pine species, however cull for the Red fir species will average about 25%, for Incense cedar 25% to 35%, for Douglas fir 15% to 20%, for White fir 15%.

Butt scars from old ground fires are numerous on both the mature Sugar pine and Ponderosa pine trees although of less importance on the latter. Due to the more serious butt scars on the Sugar pine species, heavier cutting will be necessary.

E. Volume of timber by species and ownership

Volume of timber by species and ownership is given in the Appendix, Table 4. Out of a total gross volume of 2,631MM feet BM in all Units after deduction for cull 30% is Ponderosa pine, 21% Sugar pine, 27% Douglas fir, 14% White fir, 4% Red fir, 3% Incense cedar and less than 1% Hemlock.

Of considerable interest is the Government ownership by species. For Ponderosa pine this is 50%, Sugar pine 50%, Douglas fir 65%, White fir 70%, Red fir 54%, Incense Cedar 86%, Hemlock 20%.

No great weight can be given to the percentage shown by ownership for the species of Douglas fir, White fir, Red fir, Incense cedar or Hemlock. This is due to the fact that accurate cruises on privately owned land is not available for these five species, whereas accurate cruises on Government owned areas for these species are available. In other words, the percent of Government ownership for these species may be high. For greater detail concerning the gross volume by ownership, species and Units refer to the Appendix, Tables 1, 2 and 3.

F. Blister Rust

Blister rust is established in the stand in Beaver Creek. Some infected Sugar pines have also been located in Horse Creek.

Control work has been in progress for the last three season, 1941, 1942, and 1943. Plans call for continuing this work during 1944.

The presence of blister rust is a threat to the perpetuation of the Sugar pine species. It is recommended that work be continued until the entire areas in Beaver and Horse Creek are put on a maintenance basis. Later it may be necessary to expand the project to other Working Circles.

5. Economic Characteristics

A. Ownership of Land Bearing on:

1. Disposal of Government timber

All Units in the Working Circle lie within the railroad land grant boundary excepting the Canyon, Kelsey and Middle Creek Units and the west half of the Horse Creek Unit. Ownership of the timber in the first three Units is 100% government with about 70% government for the Horse Creek area.

In these four Units government ownership predominates, giving the government economic control over the disposal of its timber.

Conversely the ownership pattern in all other Units of the Working Circle is to make it very difficult for the government to dispose of its timber in an orderly manner without considering the privately owned timber.

Government ownership by volume in these various Units is for West Scott Valley 16 per cent, Scott Bar Mountain-Mill Creek 39 per cent, Lungrey 53 per cent, West Beaver-Dogget Creek 66 per cent, Cow Creek 56 per cent ^{Natural Forest} government and 44 per cent O & C, Humbug-Clear Creek 69 per cent and McKinney Creek 60 per cent.

The complex ownership pattern within these various Units cannot be ignored. The government area in the West Scott Valley Unit is located primarily as isolated sections in Anna Creek, and the headwaters of Kidder, Mill, and Shackelford Creeks, while most of the privately owned timber is located in almost a solid block outside the forest boundary.

The same condition exists in the Scott Bar Mountain-Mill Creek Unit except for the south nose of Scott Bar Mountain where ownership is approximately 100% government.

The ownership pattern in the West Beaver-Dogget Creek Unit is somewhat similar in that some of the best timber in this Unit is almost solid private ownership with the government owning about every other section throughout the remainder of the Unit. The government timber generally, in all Units except Horse Creek, is more inaccessible than the privately owned timber. This is particularly true for the West Scott Valley, Lungrey, Scott Bar Mountain-Mill Creek and West Beaver-Dogget Creek Units.

The diversity of private ownership is another problem challenging a solution. Six owners control 33% of the total volume with numerous small owners controlling an additional 6%. All private owners, large or small, operate on a liquidating basis. That is, they either want to "cut out" and/or "get out" as typified by the Fruit Growers Supply Company, and operating plant at Hilt, or want to liquidate their holdings before they are too old to enjoy the proceeds, or want to use their holdings to increase their freight revenue. None of the owners has a real interest in a sustained yield program in cooperation with the Forest Service.

A study of Tables 1, 2, and 3 in the Appendix will afford greater detail concerning this problem.

2. Land Exchange

Siskiyou County is relatively poor financially. Revenue from virgin merchantable timber land is necessary to the economic well-being of the county. Although the most desirable action to permit the orderly development of sustained yield operations within the Working Circle would be the acquisition of all privately owned timber within the various Units, the County Board of Supervisors would not support such a plan unless it could be shown that such action would return an equivalent revenue to the county annually.

The County Board of Supervisors has always approved the acquisition of cutover lands by the government. They recently said that the Federal Government is the only agency that can give such lands adequate protection from fires, also the only agency able to protect them from disease such as blister rust and revegetate them when necessary. Apparently they know that private owners cannot hope to carry these lands through to the next cutting cycle and come out financially. Since most of the cutover lands do not return more than 5¢ per acre annually in tax revenue to the county, the economic wellbeing of the county is not seriously disturbed through acquisition of this type of land by the Federal Government.

The diversity of ownership seriously affects the efficient administration of the grazing resource. This resource is associated mostly with the brush and the brush grass types along the Klamath and Shasta rivers, the non-commercial timber lands outside the various Units, the high alpine types above the commercial areas or in some areas in the less valuable stand in the upper reaches of some of the Units. Some grazing values are found on the logged-over land. It would be desirable to acquire the areas outside the commercial timber belt to permit more efficient administration of the grazing resource. Except for isolated key tracts there would be no other justifiable reason for acquiring these areas. Some of this land could not be acquired since it has already been acquired by the stock men for grazing.

Although county officials have not been approached on this subject in all probability they would not object seriously since the areas in question have no commercial timber values and do not provide a large tax revenue annually.

Summarizing there are 24,520 acres of logged-over land, 35,000 acres of non-commercial timber land, 11,000 acres of alpine land, 21,000 acres of brush or brush-grass land and about 2,000 burned over land to be considered in a long term acquisition program. All the commercial timber land (about 95,000 acres) should be acquired as rapidly as it is logged over. Most of the private lands to be acquired are owned by the Southern Pacific Land Company except for the cutover lands which are owned primarily by the Fruit Growers Supply Co.

B. The Present Wood Using Industries

Two mills depend upon the timber in the Working Circle for their operations. There are three or four other smaller mills operating within the Working Circle but they obtain their timber from isolated tracts outside the merchantability boundary of the various Units.

The Fruit Growers Supply Company mill at Hilt, California, has been cutting timber from this Working Circle for approximately 24 years. Prior to their ownership it was operated by others for a few years. Their mill, having a current capacity of 25MM feet B.M. annually, is responsible for most of the logged-over land (48,780 acres) within the Working Circle. Land purchased from the Southern Pacific Land Company and other private owners has furnished most of the timber for their annual cut. Some timber from O & C and National Forest Lands has supplied part of the volume. They are presently operating in the West Beaver and Scott Bar Mountain areas with some timber coming from outside the Working Circle in Moffett Creek. During 1944, they plan to cut 10MM feet BM respectively from the West Beaver and Scott Bar Mountain areas. With the exception of some government timber, they hope to obtain through a Government land exchange now being negotiated the cut will be from areas they own. The company owns sufficient timber to continue operations for approximately six years in addition they may be able to acquire some railroad land which will permit operations for an additional four years.

This mill does not manufacture lumber for the public market. Practically all the material manufactured goes into box shuck for the citrus industries. In other words, all grades of lumber whether the uppers or the lowers is made into box shuck.

The Sharp Lumber Company mill at Yreka, California, started out as a "shoe-string" outfit several years ago. Prior to 1943 they did not obtain their timber from the Working Circle. This mill changed hands about the time war was declared with present plans to take advantage of the war market for lumber. They own no timber, buying it as occasion demands. Recently they purchased 16MM feet BM from the Forest Service, part of which is outside of what we previously had determined as the merchantability line.

Last season out of a total cut of about 10MM feet BM about 3MM feet BM was cut from the Southwestern portion of the Scott Bar Mountain-Mill Creek Unit.

Current plans of this company call for a production of 12MM feet BM during 1944, mostly Government.

C. Community Requirements

1. Employment

The timber industries in the county furnish employment for approximately 40% of the working population. Any stoppage of work by lumber companies would seriously upset the economic situation in the county.

2. Materials

Most of the timber products manufactured ^{are} is exported. This is especially true for the Hilt and Sharp operations which export most of their materials outside of the county; most of the former going to the citrus industry and the latter to fill war orders. All rough lumber and most of the dimension material needed locally can be supplied by smaller mills, of which there are 2 or 3 in the Working Circle. Much of the surfaced lumber is shipped in from Oregon; from the larger near by plants such as the Long Bell at Weed and the McCloud River Lumber Company plant at McCloud.

D. Transportation Facilities

The nearest Railroad loading points are Yreka, Hornbrook and Hilt, California. Railroad facilities are adequate. Transportation to these shipping points must be by truck over the Klamath River highway or Etna-Fort Jones Road; both two-lane oil surfaced roads. Utilization roads to these primary outlets must be constructed.

E. Present and Future Market

The current war market is good and is anticipated to remain satisfactory during the immediate war period and for several years following. The rapid depletion of the timber areas in Northern California as well as elsewhere in California will create a market for the timber in this Working Circle. Already there is considerable pressure to place the timber on the market which pressure will increase as other more accessible bodies are cut over. This is of course a result of the current war market, however as the more accessible bodies of mixed conifer timber are cut over throughout the state, it is anticipated that this pressure to place the timber in this Working Circle on the market will increase instead of diminish.

There will always be products in excess of local needs manufactured in this area in other words local market will not be able to absorb the manufactured products hence markets in more populated centers such as San Francisco and Los Angeles must be depended upon for sale of the products produced.

F. Relationship of Market to the Silvicultural Practices

It is doubtful if the market for timber products will make it economically feasible for private owners to follow the same high standards as the Forest Service in the practice of silviculture on its lands. This is primarily because all operators are trying to liquidate their holdings and following this policy want to get the last profitable dollar from the timber they own. This in reality means a total cut of all pine trees about 18" d.d.b. with a large leave of Douglas and White fir trees due to the lower market value of the lumber from these two species.

No difficulty is expected on government land to meet the silvicultural requirements for Ponderosa and Sugar pine. Douglas and White fir presents a problem since these species are not desired by the companies due to the small margin of profit involved. However, as timber becomes more scarce, it is expected that meeting the desirable silvicultural practices for these low value species will not prove difficult. In other words, as the mixed coniferous stands are cut over in California, the wood using public will necessarily have to look to other sources for materials. The other source is what is now called the low valued species. The freight differential between Oregon, Washington and California will make it possible to place the lower valued species in California on the market without sacrificing desired silvicultural practices.

In conclusion the Forest Service should not sacrifice good silvicultural practices in the sale of its low valued species to local firms. As the timber in California becomes more scarce the timber within this Working Circle will become economically more ripe for cutting. A waiting game will pay larger silvicultural dividends than exerting pressure to sell timber within the Working Circle as soon as possible, before it is economically ripe. Right

G. Logging Conditions

Conditions for timber felling and removing logs are very diversified as the result of the great variety of surface and topographic features in the West Scott Valley, Scott Bar Mountain, Canyon Creek, Kelsey Creek, Middle Creek, Humbag and McKinney Creek Units. The general rocky character of the surface and the steep and often precipitous slopes makes logging difficult. The two exceptions to this general rule are, first, along the top and upper slopes of the Scott Bar Mountain ridge between Scott Bar Mountain and the Mill Creek road, and, second, the easy southern slope of Scott Bar Mountain. Here the ridges run out into half mile wide flats or gently sloping areas with practically no rock outcrop or altered surfaces. The excellent stand of timber and fine ground conditions make these the most desirable logging areas within any of these units.

In the Horse Creek, West Beaver-Dogget Creek Units the factors of surface and topography as they effect logging are more favorable on the upper slopes and ridges than in the canyon bottoms. On the upper slopes and ridge tops the surfaces are usually smooth. Slopes drop away uniformly and the draws are neither deep or sharp. As the creek bottoms are approached the slopes become steep, in cases precipitous and the surfaces are in part rough and broken.

In the Lungrey Unit, the factors of surface and topography as they effect logging are more favorable in the basin at the headwaters of the Lungrey and Empire Creek and along the main ridge top than they are on the slopes into Beaver Creek or in the lower extremities of the Unit sloping into Empire or Lungrey Creek. Here the slopes are very steep and logging will prove difficult also the fact that the timber becomes progressively poorer in quality as you proceed down the slope, adds to the difficulty economically.

Over all the Units rock outcrops can be classified as somewhat similar, being absent on approximately 50% of the area, occassional on 40% and numerous on 10%. The one main exception to this is the timbered area in Etina Creek, where rock outcrops are more numerous adding greatly to the difficulties in logging, especially when combined with the steep slopes that prevail in this area.

Undergrowth is quite similar throughout all Units excepting the nose of Scott Bar mountain and the Lungrey area which have less undergrowth. Undergrowth for the area as a whole which includes reproduction may be classified as absent on about 15% of the area, light on 35% of the area, medium on about 30% and dense on about 20% of the area.

H. Mill Location

The topography separation of the Units makes it economically inadvisable to consider a central location for a mill to serve all Units.

The set-up proposed is to establish portable mills at several points in the Working Circle. These mills could be moved and kept near the timber to reduce the log haul. Only rough lumber or rough deminsion products would be processed in these portable plants. A Central processing plant to handle the rough product should be located probably at Weed or Ireka with the rough lumber being transported to this plant for finishing.

The following locations are recommended:

1. Mouth of Horse Creek
2. Mouth of Beaver Creek
3. Scott Valley - its exact location depending on area of cutting for the year.

6. Objective of Management and Sales Policies

The principal objectives of management for this Working Circle cannot be outlined without an understanding of the complexities of management resulting from the diversities of ownership and the topographic separation of the Units. A study of the enclosed map will bring these two problems into sharp relief.

Efforts have been made to work out cooperative sustained yield plans with the Fruit Growers Supply Company without success. This company owns or controls a large volume of timber in both the Scott Bar Mountain - Mill Creek and West Beaver-Dogget Creek Units. Failure to interest them has made it impossible to consider these two units in a sustained yield management plan for the Working Circle.

The remaining topographically separated Units, Horse Creek, West Scott Valley, Kelsey Creek, Canyon Creek, Middle Creek, Humbug-Clear Creek, Lungrey, McKinney Creek Units and the south nose of the Scott Bar Mountain-Mill Creek Unit offers some promise for the development of a sustained yield management plan for the remainder of the working circle. However, before this can be done we must find a party who will purchase the private timber lands and enter into a cooperative sustained yield management plan involving both the government and private timber. The purchase of the private timber lands would, it is estimated, involve an initial investment of 1,500,000 dollars. The size of the initial investment has discouraged prospective partners. The high initial investment plus the topographically separated character of the Units added to the high cost of road construction and the relatively tough logging show generally, are obstacles to the successful development of a cooperative sustained yield plan for the area.

purchasers?

The Long Bell Company of Weed has shown some interest in an arrangement of this nature. They have the finances, and are about out of timber. If a cooperative plan can be worked out with them the complexities of the problem would be solved and the application of sound principles of management for the area would be simplified.

Before we can develop any objective of management or a sales policy certain assumptions must be made.

Assuming final plans of the Long Bell Lumber Company include the government and private timber in the Horse Creek, Kelsey Creek, Canyon Creek, Middle Creek, West Scott Valley, and the Southwestern area of the Scott Bar Mountain-Mill Creek Units the principal objectives of management for the Working Circle divide into two parts, one involving sustained yield operations and one where sustained yield as such cannot be considered during the first cutting cycle.

A. Horse Creek, Kelsey Creek, Canyon Creek, Middle Creek, West Scott Valley, and the Southwestern area of the Scott Bar Mountain-Mill Creek Units;

1. Reserve all government timber in these Units for the operating company.

2. Work out a cooperative arrangement with the company whereby similar marking principles are applied for all timber in the different Units regardless of ownership.

3. Include a land exchange section in the plan permitting the orderly acquisition of all privately cut over areas in the Units currently so total Federal ownership will be effected by the end of the first cutting cycle. Such a plan should include a method of compensation for the volume of merchantable trees over 22" D.B.H. marked by the Forst Service and left by the Company on its land.

4. Establish allowable annual cuts. This would probably be somewhere in the neighborhood of 12MM feet B.M. annually for the Horse Creek Unit and about 10MM feet BM annually for the remainder of the Units in the first cutting cycle.

5. All species excepting hemlocks should be included. It would be unwise to eliminate Douglas Fir and White Fir areas from consideration since even though these species are not economically ripe today, they will be within twenty years; after the shortage of timber in Northern California becomes a real problem.

B. West Beaver-Dogget Creek, Lungrey, Cow Creek, McKinney Creek, Humbug-Clear Creek, and the remainder of the Scott Bar Mountain-Mill Creek Unit:

1. Disposal of the timber in these Units should not be piecemeal. To do so will endanger the sale of the more isolated areas. When sales are made all merchantable timber in a Unit regardless of species should be included.

2. Limit sale of timber to local mills presently operating to prolong the life of these plants as long as possible.

3. Sale of timber in any of the Units will not be made unless the operating company controls the privately owned timber and agrees to leave a reasonably residual stand of thrifty trees over 22"d.b.M. on the privately owned lands for which compensation will be arranged.

4. Use the proceeds of the sale up to $33\frac{1}{3}$ per cent for the acquisition of the privately owned cutover areas and through tripartite exchange acquire the key grazing areas outside the boundaries of the Units.

5. Since sustained yield is not possible for these Units it will not be considered in the sale of the timber.

C. Principles applying to all Units in the Working Circle:

1. Provide a management plan whereby the timber will be removed in an orderly manner in the proper sequence taking into account the specific need of individual species.

2. Leave the stand, after cutting, in a healthy condition and one which will promote rapid growth.

3. Do not make sales of timber within any of the Units to mills having an annual capacity of less than 5000 feet BM. Limit the sales to such mills to the isolated small bodies of timber outside the boundaries of the Units.

4. Secure a cruise of the government timber in the West Scott Valley Unit. Also in the Humbug-Clear Creek and McKinney Creek Units.

5. No sale of live Sugar pine for shakes will be made. Such sales will be limited to dead trees or green trees outside the boundaries of the Units.

6. No sales of green material for wood from coniferous stands will be made for local use from any of the Units. Confine such sales to areas outside the Unit boundaries.

7. All Incense cedar should be reserved for local use. There is a real need for this material for fence posts. ✓

7. Silvicultural Policies

A. Treatment through cutting

1. Methods of marking

Marking should follow the selection or group selection method now in common practice for Region 5. During 1942, cut and leave strips were run in the Horse Creek Unit. These strips totaling 126.2 acres showed a cut of Ponderosa pine 64.3 per cent, Sugar pine 78.6 per cent, White fir 40 per cent, and Douglas 52.5 per cent; the high percentage of cut for Sugar pine was the result of numerous butt scars caused by historical surface fires. This condition prevails generally over most of the Working Circle.

2. Hazard Reduction

All snags over 30" d.b.h. will be felled. Brush will be piled and burned along all ridge tops, creek bottoms, along main utilization roads, and along at least four skid roads per landing.

B. Material to be grown

white traid fir

Effort will be directed to growing saw timber only. Incense cedar for fence posts and Christmas trees will also be grown as a by-product.

8. Land Acquisition and Exchange Policies

Privately cutover land will have priority over all other land except for possible key tracts that may develop. Next will be the acquisition of grazing land along the Siskiyou summit followed by the acquisition of the grazing land along the lower slopes on the north side of the Klamath River. Following the completion of this program a new program of action will be developed.

*with
under
stands*

9. Administrative Correlation

No special problems in grazing, recreation, wild life and game management, water shed protection, or water power development is anticipated as a result of the orderly disposal of timber in this Working Circle.

increased Increased fire protection difficulties are expected as the timbered lands are cut over. However, it is not believed that the uncrossed hazards will prove too serious and with recognition of the hazards in planning the protection organization each season, no serious fires should occur.

Care will have to be exercised in the location of utilization roads particularly in Kelsey Creek, Canyon Creek, and Middle Creek where summer home tracts are located in the mouths of these creeks. No disturbance of the summer home tracts will result if care is taken in laying out roads to the timber in these areas.

APPENDIX

HORSE CREEK UNIT

(Gross Volume - MM feet B.M.)

Ownership	PP	SP	DF	WF	RF	IC	HEM	TOTAL	AREA
Government	98.6	98.6	225.1	78.3	16.0	17.6	1.9	536.1	20440
Sou. Pacific	29.0	19.9	*28.9	*28.0	*18.0	*3.2	*7.2	134.2	7760
Winton	9.0	9.4	* 9.0	* 9.0	* 4.0	*1.0	---	41.4	2130
Other Private	11.0	11.6	*10.0	*10.0	* 4.0	*2.0	---	48.6	3170
TOTAL	147.6	139.5	273.0	125.3	42.0	23.8	9.1	760.3	34500

36.72
*Estimates
37.8

440.3

57.9

4.3

X .60
40 456.2
11.4 Per Yr.

HUMBUG - CLEAR CREEK UNIT

(Gross Volume - MM feet B.M.)

Ownership	PP	SP	DF	WF	TOTAL	AREA
Government	25.7	10.3	18.9	2.0	56.9	8140
Sou. Pacific	7.5	3.8	*5.8	*.3	17.4	4600
Other Private	4.0	1.6	2.0	---	7.6	440
TOTAL	37.2	15.7	26.8	2.3	81.9	13180

*Estimates

McKINNEY CREEK UNIT

(Gross Volume - MM feet B.M.)

Ownership	PP	SP	DF	WF	IC	TOTAL	AREA
Government	16.4	7.8	12.9	--	--	37.1	3320
Sou. Pacific	13.5	4.9	6.9	* 0.3	--	25.6	3560
TOTAL	29.9	12.7	19.8	0.3	--	62.7	6880

*Estimate

KELSEY CREEK
CANYON CREEK & MIDDLE CREEK
UNITS
 (Gross Volume - MM feet B.M.)

OWNERSHIP	PP	SP	DF	WF	RF	IC	TOTAL	AREA
Government	67.4	41.0	39.0	23.0	--	11.0	191.0	6579

SCOTT BAR MTN. - MILL CREEK UNIT
 (Gross Volume - MM feet B.M.)

OWNERSHIP	PP	SP	DF	WF	RF	IC	TOTAL	AREA
Government	74.0	30.8	35.6	14.3	--	8.5	163.2	7516
F. G. S. Co.	40.0	20.8	*18.0	--	--	--	78.0	6860
Sou. Pacific	72.0	30.0	*30.0	--	--	--	132.0	11200
Other Private	24.0	9.3	* 9.0	--	--	--	42.3	2160
TOTAL	210.0	90.1	92.6	14.3	--	8.5	415.5	27736

*Estimates

WEST SCOTT VALLEY UNIT
 (Gross Volume - MM feet B.M.)

OWNERSHIP	PP	SP	DF	WF	RF	IC	TOTAL	AREA
Government	*13.0	*8.2	*17.2	*8.0	*2.3	*1.0	49.7	5840
Sou. Pacific	64.0	25.0	26.0	*14.8	*1.5	*3.9	135.2	17300
Roberts	22.0	24.0	*13.8	* 6.2	--	--	66.0	3580
Other Private	24.0	9.8	*23.5	* 5.9	--	--	63.2	8920
TOTAL	123.0	67.0	80.5	34.9	3.8	4.9	314.1	35640

*Estimates

LUMGREY UNIT

(Gross Volume - MM feet B.M.)

Ownership	PP	SP	DF	WF	IC	TOTAL	AREA
Government	46.5	14.1	24.0	5.9	5.7	96.2	5480
Buschow	11.5	5.2	* 8.0	*2.0	*0.5	27.2	1440
Sou.Pacific	26.0	8.8	*10.0	*2.0	*1.0	47.8	5220
Other Private	4.9	3.3	* 0.5	---	---	8.7	1120
TOTAL	88.9	31.4	42.5	9.9	7.2	179.9	13260

120.3
*Estimates
66.92

52.4

29.12

4.03

X 1.6

40 | 107.9

2.7 per yr.

WEST BEAVER - DOGGETT CREEK UNIT

(Gross Volume - MM feet B.M.)

Ownership	PP	SP	DF	WE	RF	IC	TOTAL	AREA
Government	57.0	65.3	73.9	94.6	27.0	25.8	343.6	10480
F. G. S. Co.	13.0	45.0	*26.0	--	--	--	80.0	5580
Sou.Pacific	20.7	25.3	*22.0	*15.0	--	--	83.0	8730
Buschow	1.2	3.0	--	--	--	--	4.2	200
Other Private	2.5	4.0	--	--	--	--	6.5	1800
TOTAL	94.4	142.6	121.9	109.6	27.0	25.8	521.3	26790

*Estimates

COW CREEK UNIT

(Gross Volume - MM feet B.M.)

Ownership	PP	SP	DF	WF	RF	IC	TOTAL	AREA
Government	8.9	6.0	8.7	17.1	15.4	2.7	58.8	2220
O & C	2.3	6.1	1.8	11.3	24.8	---	46.3	2072
TOTAL	11.2	12.1	10.5	28.4	40.2	2.7	105.1	4292

SUMMARY - COMMERCIAL TIMBER

(By Ownership - Volume By Species - MM Feet B.M. Total Area)

OWNERSHIP	PP	SP	DF	WF	RF	IC	HEM	TOTAL	AREA
Government	407.1	282.1	455.3	253.2	60.7	72.3	1.9	1532.6	70015
Sou. Pacific	232.7	117.7	129.6	60.4	19.5	8.1	7.2	575.2	58370
F. G. S. Co.	53.0	65.0	44.0	--	--	--	--	162.0	12440
Roberts	22.0	24.0	13.8	6.2	--	--	--	66.0	3580
Winton	9.0	9.4	9.0	9.0	4.0	1.0	--	41.4	2130
Buschow	12.7	8.2	8.0	2.0	--	0.5	--	31.4	1640
O & C	2.3	6.1	1.8	11.3	24.8	--	--	46.3	2072
Other	70.4	39.6	45.0	15.9	4.0	2.0	--	176.9	17610
TOTAL	809.2	552.1	706.5	358.0	113.0	83.9	9.1	2631.8	167857

COMMERCIAL TIMBER AREAS

(Mostly Mixed Conifer With Some Areas Of WF-RF)

UNIT	GOV.	SO.PAC.	FGSC	WINTON	ROBERTS	O&C	BUSCHOW	OTHER	TOTAL
Humbag-Clear Creek	8140	4600	--	--	--	--	--	440	13180
Horse Creek	20440	7760	--	2130	--	--	--	3170	33500
Cow Creek	2200	--	--	--	--	2072	--	--	4292
McKinney Creek	3320	3560	--	--	--	--	--	--	6860
Lungrey	5480	5220	--	--	--	--	1440	1120	13260
Canyon-Middle-Kelsey Creek	6579	--	--	--	--	--	--	--	6579
Scott Bar Mt.-Will Creek	7516	11200	6860	--	--	--	--	2160	27736
West Beaver-Doggett Creek	10490	8730	5580	--	--	--	200	1800	26790
West Scott Valley	5840	17300	--	--	3580	--	--	8920	35640
TOTAL	70015	58370	12440	2130	3580	2072	1640	17610	167857

LOGGED OVER LANDS

(Mostly MC)

Acres

AREA	GOV.	FGSC	SOU.PAC.	ROBERTS	O & C	OTHER	TOTAL
Scott Bar Mtn.	--	1040	--	--	--	480	1520
West Beaver	--	920	--	--	--	--	920
West Scott Valley	--	640	--	480	--	400	1520
Cottonwood-Hungrey Grouse Creeks	22400	15180	--	--	1860	1409	40840
Soap Creek	--	1560	1080	--	--	1340	3980
TOTAL	22400	19340	1080	480	1860	3620	48780

BURNED OVER AREAS

(Potential Timber Lands - Mainly MC)

Acres						
AREA	GOV.	Sou.Pac.	FGSC	Roberts	Other	Total
Beaver Cr. Lumgrey	420	--	--	--	--	480 ?
Scott Valley	--	380	--	40	2780	3200
Middle Creek	1300	--	--	--	--	1300
Scott Bar Mtn.	--	160	120	--	--	280
Soap Creek	140	160	160	--	1040	1500
Horse Creek	400	--	--	--	--	400
Barkhouse	1820	1620	--	--	160	3600
Doggett Creek	80	--	--	--	--	80
TOTAL	4160	2320	280	40	3980	10780

NON-COMMERCIAL TIMBER ALPINE - WF - RF

(All High Elevation Areas)

Acres					
AREA	GOV.	SOU.PAC.	O & C	OTHER	TOTAL
Scott Valley	14040	7560	--	880	22480
Canyon Creek	1720	--	--	--	1720
Tom Martin	900	--	--	--	900
Horse Creek	3580	3260	--	120	6960
Beaver Creek	4520	520	3040	240	8320
TOTAL	24760	11340	3040	1240	40380

NON-COMMERCIAL TIMBER AREAS

(Mostly ME with some DF)

AREA	<u>Acres</u>							TOTALS
	GOV.	SOU.PAC.	FGSC	WINTON	ROBERTS	O&C	OTHER	
Mt. Ashland	1000	--	--	--	--	900	--	1900
Mt. Sterling	--	320	--	--	--	--	--	320
Beaver & Lumgrey Cr.	2980	2820	280	--	--	--	1040	7120
Cottonwood	1400	2100	--	--	--	--	1920	5420
Humbug-Clear Creek	1800	2240	--	--	--	--	660	4780
East Barkhouse- Vesa Bluff	7760	5920	--	--	--	--	1020	14700
N. Mill-McKinney Cr.	7020	4120	--	--	--	--	1260	12400
Horse Creek	800	760	--	--	--	--	--	1560
South Mill Creek	6100	2640	--	--	--	--	600	9340
T. Martin-Canyon Cr.	21000	1360	--	--	--	--	160	22520
Sniktow	7000	1120	--	--	360	--	920	9400
Quartz Hill	5	200	--	--	40	--	2215	2460
Chapparral Hill	--	120	--	--	--	--	600	720
Quartz Valley-Etna	--	800	--	--	--	--	6120	6920
Soap Creek	12800	10000	160	--	--	--	11420	34380
TOTALS	69745	34520	440	--	400	900	27935	133940

NON-POTENTIAL TIMBER LANDSAcres

(Mostly Brush and Brush-Grass Areas)

OWNERSHIP

Southern Pacific Co.	21380
Other Private	16760
Government	30630
TOTAL	68770

LAND CLASSIFICATION

(By Ownership)

LAND CLASSIFICATION

(Acres)

	GOV.	SO. PAC.	FGSC	ROBERTS	WINTON	BUSCHOW	O&C	OTHER	TOTAL
Com. Timber	70015	58370	12440	3580	2130	1640	2072	17610	167857
Logged Over	22400	1080	19340	480	--	--	1860	3620	48780
Non-Com. Timber	69745	34520	440	400	--	--	900	27935	133940
Alpine Areas	24760	11340	--	--	--	--	3040	1240	40380
Brush	30630	21380	--	--	--	--	--	16760	68770
Recent Burns	4160	2320	280	40	--	--	--	3980	10780
Agricultural	--	--	--	--	--	--	--	21000	21000
TOTAL	221710	129010	32500	4500	2130	1640	7872	92145	491507